

PATENT COOPERATION TREATY

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From the
INTERNATIONAL SEARCHING AUTHORITY

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To:

see form PCT/ISA/220

20/10

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2005/009678

International filing date (day/month/year)
24.03.2005

Priority date (day/month/year)
01.04.2004

International Patent Classification (IPC) or both national classification and IPC
B29C33/40, B29C33/42, B29C33/56, B29C41/20, B29C33/38

Applicant
3M INNOVATIVE PROPERTIES COMPANY

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2005/009678

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2005/009678

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	8,10,11,15-19,22,23
	No: Claims	1-7,9,12-14,20,21
Inventive step (IS)	Yes: Claims	
	No: Claims	1-23
Industrial applicability (IA)	Yes: Claims	1-23
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V.

1 Reference is made to the following documents:

- D1 : WO 2004/010452 A (3M INNOVATIVE PROPERTIES COMPANY;
YOKOYAMA, CHIKAFUMI; KAWAI, TAKAYUKI) 29 January 2004 (2004-01-29)
D2 : US 5 443 774 A (KLUEH ET AL) 22 August 1995 (1995-08-22)
D3 : WO 2004/007166 A (3M INNOVATIVE PROPERTIES COMPANY;
YOKOYAMA, CHIKAFUMI; YODA, AKIRA; KI) 22 January 2004 (2004-01-22)

2 INDEPENDENT CLAIMS 1, 20 AND 21

The following is stated under reference to item VIII, whereby it is to be noted that unclear features cannot be used for unambiguously distinguishing over prior art in order to assess novelty or inventive step in the sense of Article 33 PCT.

2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.
Document D2 discloses (the references in parentheses applying to this document) a mold (4) comprising a support (3) comprising a composite material of a polymeric material and a reinforcing material and a shape-imparting surface layer (2) disposed on the support, see col.2, line 61-col.3 line 5 and fig. 1-2.

Therefore the subject-matter of claim 1 cannot be considered as novel (Article 33(2) PCT). Therefore claim 1 does not fulfill the requirements of Article 33(3) PCT either. It is to be noted that the subject-matter of claim 1 is also anticipated by other documents, see the search report and the mentioned relevant passages.
In particular document D1 discloses a mold comprising a support comprising a composite material of a polymeric material and a reinforcing material and a shape-imparting surface layer (3) disposed on the support, see figures and page 8, lines 11-25.

2.2 The subject-matter of claim 20 is not new in the sense of Article 33(2) PCT.
As seen here above, document D1 discloses the mold of claim 1. It also discloses a method of making a microstructured article comprising providing such a mold (10),

disposing a curable material (33) between a substrate (31) and the shape-imparting microstructured surface layer (3) of the mold (10), curing the curable material (33) and removing the mold (10), see page 15, line 14 -page 16, line 29, and fig. 8d, 9e-9g.

Therefore the subject-matter of claim 20 cannot be considered as novel (Article 33(2) PCT). Therefore claim 20 does not fulfill the requirements of Article 33(3) PCT either.

- 2.3 The subject-matter of claim 21 is not new in the sense of Article 33(2) PCT. Document D1 discloses (the references in parentheses applying to this document) a method for producing a flexible mold comprising providing a master (5) having on a surface protrusion pattern(14,15), applying a curable resin composition (3) to the surface protrusion pattern of the master mold to form a shape-imparting layer precursor, providing a support layer (1,2) on the shape-imparting layer wherein the support layer comprises a composite material of a polymeric material and a reinforcing material, curing the curable resin and releasing the shape-imparting layer together with the support from the master mold (5), see page 11, line 21- page 13, line 4 and fig. 5a-5c, 6d-6e.
- Therefore the subject-matter of claim 21 cannot be considered as novel (Article 33(2) PCT). Therefore claim 21 does not fulfill the requirements of Article 33(3) PCT either.

3. DEPENDENT CLAIMS

- 3.1 In view of the lack of novelty in the independent claims, it is questionable whether the dependent claims 2-19 and 22-23 are still linked by a single general inventive concept. The application, hence does not necessarily meet the requirements of unity as defined in Rules 13.1 and 13.2 PCT.
- 3.2 As a consequence thereof, the examining instance cannot presently find a ground for the selection of one or more of the additional features as listed in claims 2-19 and 22-23 in order to support the presence of an inventive step. As a consequence, claims 2-19, 22, 23 do not meet the requirements of Article 33(3) PCT.
- 3.3 Concerning the disclosure of the additional features of claims 2-7,9,12-14, as such, reference is made to the international search report and the relevant passages of the

cited documents in reference to the claims.

4. Claims 1-23 fulfill the requirements of Article 33(4) PCT.

Re Item VII.

1. At present it cannot be stated which of the afore mentioned documents represents the closest prior art. However, in accordance with the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in such a document should be mentioned in the description, and such a document identified therein.
2. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
3. The independent claims have not been drafted in the two-part form in accordance with Rule 6.2(b) PCT, with those features known in combination from the closest prior art document, being placed in their respective preambles (Rule 6.3(b)(i) PCT) and with the remaining features being included in their respective characterising parts (Rule 6.3(b)(ii) PCT).

Re Item VIII.

The application does not meet the requirements of Article 6 PCT, because the claims are not clear.

1. In claim 9, the expression "the group consisting essentially of" raises the doubt in the mind of the reader whether the list of materials contained in said group is complete, or if there could be other materials as well, see PCT Guidelines 5.40.
2. In the description, page 13, lines 17-24, the applicant raises the possibility of an alternative in which the presence of a composite material of a polymeric material and a reinforcing material is not required. This raises doubt as to whether the composite nature of the support is an essential feature of the subject-matter for which protection is sought, see PCT Guidelines 5.15, 5.33.